FOODS AND BEVERAGES
426-129
99-8-2 174
1872
RECORDED

A.D. 1872, 25*th* OCTOBER. N° 3163.

# Preserving and Curing Raw Meat, &c.

---

**LETTERS PATENT** to Alexander Alison, of Elgin Road, Bayswater, in the County of Middlesex, for the Invention of "IMPROVED MEANS OF PRESERVING AND CURING RAW MEAT, IN PACKING THE SAME, AND IN APPARATUS EMPLOYED THEREWITH."

Sealed the 18th February 1873, and dated the 25th October 1872.

---

**PROVISIONAL SPECIFICATION** left by the said Alexander Alison at the Office of the Commissioners of Patents, with his Petition, on the 25th October 1872.

I, ALEXANDER ALISON, of Elgin Road, Bayswater, in the County of Middlesex, do hereby declare the nature of the said Invention for "IMPROVED MEANS OF PRESERVING AND CURING RAW MEAT, IN PACKING THE SAME, AND IN APPARATUS EMPLOYED THEREWITH," to be as follows:—

This Invention relates,—

Firstly. To methods of preserving and curing meat with and without the use of cold air derived from a vessel submerged in water.

Secondly. To a process of salting meat and packing it in barrels or other package in combination with liquid fat.

Thirdly. To a process of packing fresh meat in barrels and tins from which the air can be exhausted and liquid fat poured or forced in.

Fourthly. To fitting permanent air-tight bunkers on board ship with spars or rods in the interior to strengthen them.

Fifthly. To a process of preparing raw meat artificially dried.

The several means and processes for preserving and curing meat, and the construction of apparatus or appliances for packing or retaining the meat in a state to be transported and otherwise according to my Invention, will be gathered from the following :—

First. My air cooling machine consists of an air vessel immersed in water in a tank, air is compressed in the cylinder, the water outside hastening the cooling. This machine should be used in all cases of curing and packing meat when the temperature is over 45 degrees of heat, for when the temperature is above that the meat does not readily take the salt, and is therefore imperfectly cured. As to fresh meat for exportation, it too should be packed at a low temperature, for then it is in the best state for packing.

Secondly. For uncooked salt meat the following is my process :—The carcase is cut into convenient pieces and salted, when it is allowed to lay or hang in a cool place for several days. It is then packed into barrels or other packages, after which the barrels are filled up with liquid fat, which surrounds the meat with a coating of solid fat which excludes the air. The object of this process is to produce corned beef, mutton, and pork with less saltness than the ordinary process of packing the meat in brine. By the use of my cold air condenser this process can be carried on all the year round in summer as well as in winter (when the temperature is high meat does readily take the salt).

Thirdly. For fresh uncooked meat in tins I adopt the following plan :—I pack the pieces of meat in tins, leaving a small opening on the top of each tin. I put the tins into an air-tight vessel and extract the air. I then fill the vessel containing the tins with melted fat, which fills the tins. As soon as the fat has become solid in the tins, the tins are taken out of the vessel, when the openings at the top of the tins are sealed up.

Fresh meat may likewise be packed in metallic barrels thus :—The air is extracted and liquid fat forced in. The openings in the heads of the barrels are then hermetically closed.

Fourthly. For packing fresh uncooked meat on board ship I adopt the following plan :—Permanent air-tight bunkers are fitted up in the ship, which are supported by bars inside to prevent caving. When the meat is put in and the door closed the air is extracted and liquid fat may be admitted.

Fifthly. For dry uncooked meat the pieces of meat should be cut into thin slices and allowed to dry in a room artificially heated. When quite dry the pieces may be rubbed over with fat previously boiled with saltpetre and spices. They may then be packed in bales in canvas or other package.

---

**SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed by the said Alexander Alison in the Great Seal Patent Office on the 25th April 1873.

**TO ALL TO WHOM THESE PRESENTS SHALL COME**, I, ALEXANDER ALISON, of Elgin Road, Bayswater, in the County of Middlesex, send greeting.

**WHEREAS** Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twenty-fifth day of October, in the year of our Lord One thousand eight hundred and seventy-two, in the thirty-sixth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Alexander Alison, Her special licence that I, the said Alexander Alison, my executors, administrators, and assigns, or such others as I, the said Alexander Alison, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVED MEANS OF PRESERVING AND CURING RAW MEAT, IN PACKING THE SAME, AND IN APPARATUS EMPLOYED THEREWITH," upon the condition (amongst others) that I, the said Alexander Alison, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed,

and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

**NOW KNOW YE**, that I, the said Alexander Alison, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof (that is to say) :—

I erect a building for curing and packing meat as nearly air-tight as possible. This building will have double walls of brick or other material, with an open space between the walls properly ventilated.

The machine I use for cooling the above curing and packing house is a pump or ram to compress air from 60 lbs. to 200 lbs. pressure per square inch. The compressed air is passed into a receiver consisting of a series of pipes or other suitable vessel. Both the pump and the receiver are immersed in water, with a continual flow to keep them cool. The compressed air passes out of the receiver into the curing and packing house, and is conveyed in perforated pipes along the whole length of the buildings on or under the floor, which equalizes the supply throughout the building. The warm air is allowed to escape at the ceiling and roof by a chimney, which may be opened or shut at pleasure. The doors and windows will be kept closed except when the cold is in excess. As the compressed air escapes through the flooring into the building it expands, which produces coldness.

The machine is driven by water power, steam engine, or other motive power.

For corned meat the pieces of meat are rubbed over with a mixture of dry sugar, salt, and saltpetre. After allowing the meat to lay or hang for several days in the curing house in a room artificially cooled it is packed into barrels, tins, or other package, and liquid fat poured in. The fat is melted in coppers, and may be treated with chemicals to make it keep.

For fresh meat the meat is packed in the curing house artificially cooled in the barrels, tins, or other packages, without curing, from which the air is extracted and liquid fat poured in with or without using a receiver.

I claim the following :—

First. The Invention of an air-tight curing and packing house and air-cooling machine for reducing the temperature of such curing and packing house.

Secondly. The Invention of preserving and packing cured meat in a room artificially cooled by pouring in liquid fat.

Thirdly. The Invention of preserving fresh meat in a room artificially cooled by exhausting the air from the barrel in which it is packed, and pouring in liquid fat.

In witness whereof, I, the said Alexander Alison, have hereunto set my hand and seal, this Twenty-fifth day of April One thousand eight hundred and seventy-three.

ALEXANDER ALISON. (L.S.)

LONDON:
Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1873.